National Institute of Environmental Health Sciences

The impact of natural disasters on child health and investments in rural India

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Abstract:

There is growing concern that climate change will lead to more frequent natural disasters that may adversely affect short- and long-term health outcomes in developing countries. Prior research has primarily focused on the impact of single, large disaster events but very little is known about how small and moderate disasters, which are more typical, affect population health. In this paper, we present one of the first investigations of the impact of small and moderate disasters on childhood morbidity, physical growth, and immunizations by combining household data on over 80,000 children from three waves of the Indian National Family and Health Survey with an international database of natural disasters (EM-DAT). We find that exposure to a natural disaster in the past month increases the likelihood of acute illnesses such as diarrhea, fever, and acute respiratory illness in children under 5 year by 9-18%. Exposure to a disaster in the past year reduces height-for-age and weight-for-age z-scores by 0.12-0.15 units, increases the likelihood of stunting and underweight by 7%, and reduces the likelihood of having full age-appropriate immunization coverage by nearly 18%. We also find that disasters' effects vary significantly by gender, age, and socioeconomic characteristics. Most notably, the adverse effects on growth outcomes are much smaller among boys, infants, and families with more socioeconomic resources.

Source: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3544338

Resource Description

Exposure :

weather or climate related pathway by which climate change affects health

Extreme Weather Event, Food/Water Security, Temperature

Extreme Weather Event: Drought, Flooding

Food/Water Security: Food Access/Distribution

Temperature: Extreme Cold, Extreme Heat

Geographic Feature:

resource focuses on specific type of geography

Rural

Geographic Location:

resource focuses on specific location

Non-United States

Non-United States: Asia

Asian Region/Country: India

Health Impact: ☑

specification of health effect or disease related to climate change exposure

Developmental Effect, Infectious Disease, Respiratory Effect, Other Health Impact

Developmental Effect: Other Functional Deficit

Infectious Disease: Foodborne/Waterborne Disease

Foodborne/Waterborne Disease: Other Diarrheal Disease

Respiratory Effect: Other Respiratory Effect

Respiratory Condition (other) : Acute Respiratory Infection

Other Health Impact: Fever

Population of Concern: A focus of content

Population of Concern: ☑

populations at particular risk or vulnerability to climate change impacts

Children, Low Socioeconomic Status

Resource Type: ☑

format or standard characteristic of resource

Research Article

Timescale: ☑

time period studied

Time Scale Unspecified